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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/239,907	01/29/1999	ANDREW MACCORMACK	858063.435	6683

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EXAMINER

BELIVEAU, SCOTT E

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/239,907

Applicant(s)

MACCORMACK ET AL.

Examiner

Scott Beliveau

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-11 and 13-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective because it does not identify the citizenship of each inventor. Specifically, the citizenship of Howard Gurney is missing. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02. The examiner acknowledges that the applicant is in the process of obtaining a new declaration.

Drawings

The corrected or substitute drawings were received on 18 November 2002. These drawings are approved.

Specification

2. The substitute specification filed 18 November has not been entered because it does not conform to 37 CFR 1.125(b) because it is not accompanied by:

- (1) A statement that the substitute specification includes no new matter; and
- (2) A marked up version of the substitute specification showing all the changes (including the matter being added to and the matter being deleted from) to the specification of record. Numbering the paragraphs of the specification of record is not considered a change that must be shown pursuant to this paragraph.

It is however noted that the "proposed" changes appear to overcome the objections noted in the prior Office Action.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 3-11, and 13-20 have been considered but are moot in view of the new ground(s) of rejection as necessitated by applicant's amendment.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 3-11, and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Dokic et al. (US Pat No. 5,959,659).

In consideration of claims 1 and 10, the examiner refers the applicant to the Dokic et al. reference, which discloses a decoder or “set-top-box” (instant application: Page 3, Lines 1-6) that may function as a “receiver for the demultiplexing digital data streams . . . including data packets having a packet identifier” such as those defined by the MPEG-2 specification (Col 1, Lines 19-23; Col 2, Lines 45-65). As is known in the art, and disclosed in the instant

Art Unit: 2614

application, there are a number of known techniques for a receiver performing the demultiplexing of time multiplexed MPEG-2 transport packets (Page 4, Lines 14-15). The aforementioned Dokic et al. reference reads on the claimed language in view of Figures 3 and 5. Figure 3 illustrates a block diagram of the “receiver” architecture comprising: “input circuitry for receiving the digital data stream” [112], a demultiplexing section [104], and a control section [108] (Col 5, Lines 60-67 – Col 6, Lines 1-9). Referring now to Figure 5, the demultiplexing section is further shown to comprise “a memory for storing packet identifiers” [205], “a first control circuit” or host microprocessor [106], and a “second” and “third control circuit” embodied via the controller [204] of the digital signal processor [102]. The reference further describes the interaction between these components. The “first control circuit” provides “packet identifiers of data packets required by the receiver” to the “memory” [205] (Col 8, Lines 28-31, 58-60; Col 9, Lines 10-23). The “second control circuit” extracts the payloads of the transport packets responsive to a “match” as indicated by the “third control circuit” (Col 8, Lines 20-52; Col 9, Lines 18-43).

The reference further teaches that the “third control circuit” further may output the “address” of the “extracted packet identifier responsive to a match” and the “second control circuit” accesses that address to “retrieve control information associated with packet identifier”. The digital signal processor [102] that houses both the “second” and “third control circuits” [204] also comprises two “memory addresses” or transport packet buffers [200/202] (Col 7, Lines 60-67 – Col 8, Lines 19). “Responsive to a match” the “third control circuit” accesses the appropriate “address” or buffer [200/202] to “retrieve control

information” to identify the contents of the transport packet in order to route it to the appropriate decoder or processor (Col 8, Lines 31-37).

With respect to the claimed distinction of the “control circuits”, the examiner notes that Office personnel are to give claims their broadest reasonable interpretation. Accordingly, the examiner has interpreted the aforementioned divisions as being capable of being either a physical or functional division. The reference discloses that Figure 5 contains high level “block diagrams” (Col 7, Lines 60-66) and as such it would not have been unreasonable for one of ordinary skill in the art to conclude that the controller [204] embodiment may be comprised of more than one “circuit”.

With respect to the applicant’s remarks that the transport packet buffers [200/202] of the Dokic et al. reference store only “transport packets from the transport stream” and not “control information associated with the packet identifier”, the reference teaches that the MPEG-2 transport stream may comprise packets of “control information” such as the program map table (PMT) or program association table (PAT) from the MPEG-2 transport stream (Col 4, Lines 22-27). These program specific information (PSI) tables are associated with reserved packet identifiers (PID) (ISO/IEC 13818-1: Section 2.4.4). As such, the Dokic et al. reference teaches that the PID from the received packet is parsed from the transport packet to identify the type of data carried by the transport packet. Accordingly, “control information” may be temporarily stored in the packet buffers [200/202] prior to being transferred to the host processor [106] (Col 9, Lines 29-43).

Claims 11 and 20 are rejected in view of the rejection of claim 1. The “method of demultiplexing a digital data stream” in conjunction with a “set-top-box” is met wherein the

Art Unit: 2614

reference teaches the following steps: “inputting the digital data stream” (Figure 3; Col 5, Lines 60-67 – Col 6, Lines 1-9), “storing . . . all packet identifiers. . . required by the receiver” (Col 8, Lines 28-31, 58-60; Col 9, Lines 10-23), and “determining”, “extracting”, and “demultiplexing” under the control of a “second” and “third control circuit” packets responsive to a “match” (Col 8, Lines 20-52; Col 9, Lines 18-43).

Claims 3-4 and 13-14 are rejected in view of Figure 5 wherein “the second control circuit” [204] controls the transfer of and/or processes “the input data packet to a destination” such as data buffers [206/208/210] or host microprocessor as “identified by the control information” (Col 8, Lines 31-37, 53-67). It is taught that should the “input data packets” contain private data, the entire packet will either be “transferred”. Alternatively, the packet may be “processed” such that only the payload data is “transferred” (Col 9, Lines 39-53).

In reference to claims 5 and 15, Dokic et al. teaches that the packet is “discarded” if a “match” is not found (Col 8, Lines 51-52)

Claims 6-7 and 16-17 are rejected wherein the reference teaches a method/apparatus for the interpretation and demultiplexing of received MPEG-2 transport packets (Col 7, Lines 49-59). The MPEG-2 standard (incorporated by reference) defines a transport stream as being logically constructed from a “packetized elementary stream” or PES packets. The instant application further supports this definition (Page 2, Lines 5-8).

In consideration of claims 8 and 18, the component elements of the “input” data stream are well known in the art, as evidenced by the MPEG-2 specification,. Figures 1-2 of the Dokic reference illustrates that the “input data packet comprises program specific information” or PSI tables (Col 2, Lines 3-19). As aforementioned, the receiver uses these

Art Unit: 2614

PSI tables to derive PIDs that corresponds to desired programming which are subsequently used by the “second control circuit” [204] to “retain only those data packets having sections required by the receiver” (Col 2, Lines 29-44; Col 8, Lines 20-31, 48-52).

Claim 9 is rejected wherein the “first control circuit” is a “receiver processor” [106] which controls the overall operation of the “receiver” (Col 13, Lines 13-32). The “second” and “third control circuits” [204] are embedded within a digital signal processor [106] that is coupled to a PAL [118]. The digital signal processor [106] functions as both a “search engine” to identify buffered packets and a “transport processor” to move the packets into the appropriate buffer as aforementioned (Col 8, Lines 20-52).

Claim 19 is rejected wherein the “third control circuit” [204] “systematically” searches the transport packet buffers [200/202] for a “match”. Figures 6A-C further illustrate a “systematic” method for “searching the memory” in conjunction with the demultiplexing process.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as follows. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objections made.

- The Rim (US Pat No. 6,134,272) reference discloses an MPEG2 transport decoder that is operable for storing and filtering packet data in memory during the decoding of transport stream.

Art Unit: 2614

- The Anderson et al. (US Pat No. 6,275,507) reference discloses a transport demultiplexor for demultiplexing a transport stream into a system data stream which includes PID filtering and buffering logic.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Beliveau whose telephone number is 703-305-4907. The examiner can normally be reached on Monday-Friday from 8:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703-305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Art Unit: 2614

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

SEB

December 17, 2002

A handwritten signature in black ink, appearing to read 'J. Miller', is positioned above the printed name.

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600